

§ 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments

In the Specification:

Please substitute the following paragraph for the two paragraphs beginning on page 2, line 8, and ending on page 2, line 17:

B¹ What is needed is an electric vehicle power system that overcomes the limitations described above.

Please add the following two paragraphs after the paragraph ending on page 4, line 17, and before the paragraph beginning on page 4, line 18:

B² The application of the turbogenerator/motor and associated control electronics to the hybrid electric vehicle overcomes the disadvantages of the reciprocating engine. The turbogenerator/motor power plant is vibration free, has low noise and most significantly has an extremely low level of polluting emissions. The turbogenerator/motor power plant can operate with all conventional hydrocarbon fuels and properly controlled can produce an output voltage independent of turbogenerator/motor speed.

B2
cancel'd.

The on-board energy storage devices, such as traction batteries, provide peak power requirements and absorb regenerative braking energy from the vehicle. The turbogenerator/motor performs as a current source providing average energy power and can be started using energy from the on-board energy storage device.

Please substitute the following paragraph for the paragraph beginning on page 4, line 18:

B3

One skilled in the art will recognize that the particular configurations shown herein are for illustration purposes only. In particular, the present invention is not limited to the use of a turbogenerator/motor and a HEV battery as shown in Figure 1. Rather, the turbogenerator/motor may be a gas turbine, photovoltaics, or any other conventional or newly developed energy source. Likewise the HEV battery may be a flywheel, ultracapacitor or any other conventional or newly developed energy storage device on a HEV.

Please substitute the following paragraph for the paragraph beginning on page 14, line 5:

B4

The main CPU processor software communicates data through a TCP/IP stack over intercontroller bus, typically an Ethernet-10 Base-2 interface, to gather data and send commands between power controllers. In accordance with the present invention, the main CPU processor software provides seamless operation of multiple paralleled units as a single larger generator system. One unit, the master, arbitrates the bus and sends commands to all units.

Please substitute the following paragraph for the paragraph beginning on page 14, line 15:

B5
External options port bus 802, which may also be a RS 485 communications link, allows external devices, including but not limited to power meter equipment and auto disconnect switches, to be connected to generator SP 234.

Please substitute the following paragraph for the paragraph beginning on page 17, line 19:

B6
Main CPU 472 begins execution in the "power up" state 322 after power is applied. Transition to the "stand by" state 324 is performed upon successful completing of the tasks of the "power up" state 322. Initiating a start cycle transitions the system to the "prepare to start" state 326 where all system components are initialized for an engine start. The engine then sequences through start states and onto the "run/load" states 344, 346. To shutdown the system, a stop command which sends the system into either "warm down" or "cool down" state 332, 348 is initiated. When the system has finally completed "warm down" or "cool down" process, a transition through the "shut down" state 330 will be made before the system reenters the "standby" state 324 awaiting the next cycle. During any state, detection of a fault with a system severity level indicating the system should not be operated will transition the system state to "fault" state 334. Detection of faults that indicate a processor failure has occurred will transition the system to the "disable" state 336.

Please substitute the following paragraph for the paragraph beginning on page 22, line 7:

B⁷
In the "disable" state 336 system also disables all outputs placing the system in a safe configuration when faults that prohibit safe operation of the turbine system are present. System monitoring and communications will most likely not continue.

Please substitute the following paragraph for the paragraph beginning on page 17, line 1:

B⁸
Main CPU 232 issues commands via SPI communications bus 238 to converter SP 236 to execute required converter control functions. Converter SP 236 will operate the converter (not shown) in a DC bus mode or output current mode, as selected by main CPU. In the DC bus voltage mode, converter SP 236 regulates the HEV battery power provided by power controller 230 to maintain the internal bus voltage at the setpoint. In the output current mode, the converter SP 236 uses power from the DC bus to provide commanded current out of the converter. DC bus 462 (see Figure 10) supplies power for logic power, external components and system power output.

In the Claims:

✓ Please cancel claim 7 without prejudice to or disclaimer of the subject matter therein.